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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,520	05/16/2002	Pelham Nigel Hawker	JMYT-251US	2633

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VALLEY FORGE, PA 19482-0980

EXAMINER

TRAN, HIEN THI

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,520

Applicant(s)

HAWKER, PELHAM NIGEL

Examiner

Hien Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/16/02</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “bypass means” (claim 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the drawings to comply with CFR 1.84(p)(5), e.g. they should include the reference sign(s) mentioned in the specification and vice versa.

Specification

3. The disclosure is objected to because of the following informalities:

On page 5, there is no brief description of the drawings.

Appropriate correction is required.

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claims 1 and 8 are objected to because of the following informalities:

In claim 1, line 2 --an-- should be inserted after “comprising”.

In claim 8, line 2 “-out” should be deleted for consistency.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the bypass means and its arrangement are nowhere disclosed in the specification.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is unclear as to where the body of the claim begins, and whether applicants are attempting to claim the diesel engine or the exhaust system or the combination of the two; in lines 3 and 6 “the EGR intake” has no clear antecedent basis; in lines 4-5 “the portion of recirculated exhaust gas” has no clear antecedent basis.

In claim 2, it is unclear as to what “system” is implied, whether applicants are attempting to claim the diesel engine or the exhaust system or the combination of the two. See claims 4-7 likewise. Also, in lines 1-2 “the remainder of the un-recirculated exhaust gas” has no clear antecedent basis.

In claim 4, it is unclear as to what structural limitation applicants are attempting to recite and where it is disclosed in the instant specification.

In claim 5, line 1 it is unclear as to what “bypass means” is implied and where it is disclosed in the specification and drawings; in line 2 “the arrangement” and “the filter” have no clear antecedent basis.

In claim 6, line 2 it is unclear as to what is implied by “may be”, e.g. whether the limitations following the phrase “may be” are part of the claimed invention.

In claim 7, line 2 “the recirculated gases” has no clear antecedent basis; also it is unclear as to where the EGR valve is with respect to other elements of the system. Also the language of

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the claim is directed to method limitation which renders the claim vague and indefinite as it is unclear as to what structural limitation applicants are attempting to recite.

In claim 8, lines 2-5 “the resulting gas”, “the resulting gas stream”, “the engine intake”; “the point of taking” have no clear antecedent basis

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. The art area applicable to the instant invention is that of diesel engine exhaust system.

One of ordinary skill in this art is considered to have at least a B.S. degree, with additional education in the field and at least 5 years practical experience working in the art; is aware of the state of the art as shown by the references of record, to include those cited by applicants and the examiner (*ESSO Research & Engineering V Kahn & Co*, 183 USPQ 582 1974) and who is presumed to know something about the art apart from what references alone

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teach (*In re Bode*, 193 USPQ 12, (16) CCPA 1977); and who is motivated by economics to depart from the prior art to reduce costs consistent with the desired product characteristics. *In re Clinton* 188 USPQ 365, 367 (CCPA 1976) and *In re Thompson* 192 USPQ 275, 277 (CCPA 1976).

13. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allansson et al (6,427,436 or WO 99/09307) in view of Paas (5,785,030).

With respect to claims 1-2, Allansson et al discloses a diesel engine system comprising:
an exhaust system including: an oxidation catalyst 5a; a particulate trap 5b; and an exhaust gas recirculation system (EGR), wherein the EGR system intake is mounted downstream of the oxidation catalyst so that a portion of recirculated exhaust gas passes through the oxidation catalyst 5a.

The apparatus of Allansson et al is substantially the same as that of the instant claims, but fails to disclose whether the particulate trap may be located downstream of the EGR system intake.

However, Paas discloses the conventionality of providing a particulate trap locating downstream of the EGR system intake.

Accordingly, at the time of the invention was made, it would have been obvious to one skilled in the art to alternately place the particulate trap downstream of the EGR system intake since positioning the parts of the apparatus is no more than a design choice, and well within the knowledge of one skilled in the art so as to prevent soot dust from being stuck and deposited in an air intake port thereof as evidenced by Paas and since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

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With respect to claim 3, Paas discloses that the trap may be mounted in the EGR system.

With respect to claims 4 and 6, since the claims are not structurally further limiting, the trap 5b and the EGR system of Allansson et al meet the claims. In any event, Allansson et al discloses the recirculation ratio of 5-30% by volume (col. 4, lines 55-57 of '436).

With respect to claim 5, as discussed in the 112 rejections above, the specification has no description thereof regarding the bypass means. Therefore, the difference between applicants' claim and that of the prior art cannot be identified by the specification of the instant application.

With respect to claim 7, Allansson et al discloses a cooler 7 and an EGR valve 8.

With respect to claim 8, Allansson et al discloses a process for the reduction of polluting emissions from diesel engine exhaust gas including NO_x, comprising: passing the exhaust gas through an oxidation catalyst 5a to generate NO₂ from NO in the gas, taking a portion of the gas and recycling said portion to the engine intake and trapping particulates in a filter 5b and oxidizing the particulates by reaction with at least some of the NO₂ generated by the oxidation catalyst 5a (col. 4, lines 44-62 of '436).

The method of Allansson et al is substantially the same as that of the instant claims, but fails to disclose whether the filter may be mounted downstream of the EGR system intake.

The same comments with respect to Paas apply.

14. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over either JP 08-338320 or JP 09-88727 or JP 06-066208 in view of Allansson et al (6,427,436 or WO 99/09307).

With respect to claims 1-3, 8, JP 08-338320 or JP 09-88727 or JP 06-066208 discloses a diesel engine system comprising:

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an exhaust system including: an oxidation catalyst; a particulate trap; and an exhaust gas recirculation system (EGR), wherein the particulate trap is downstream of the EGR system intake.

The apparatus and method of JP 08-338320 or JP 09-88727 are substantially the same as that of the instant claims, but fail to disclose whether EGR system intake may be mounted downstream of the oxidation catalyst.

However, it would have been obvious to one having ordinary skill in the art to provide another set of oxidation catalyst and particulate trap in the exhaust pipe of the system in the apparatus and method of JP 08-338320 or JP 09-88727 or JP 06-066208 so as to prevent soot dust and pollutants in the exhaust gas from emitting to the atmosphere without being purified and since providing another set of oxidation catalyst and particulate trap is a mere duplication of working parts and since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

In any event, Allansson et al discloses the conventionality of providing an EGR system intake mounted downstream of the oxidation catalyst.

It would have been obvious to one having ordinary skill in the art to provide another set of oxidation catalyst and particulate trap in the exhaust pipe of the system as taught by Allansson et al in the apparatus and method of JP 08-338320 or JP 09-88727 or JP 06-066208 so as to prevent soot dust and pollutants in the exhaust gas from emitting to the atmosphere without being purified and since providing another set of oxidation catalyst and particulate trap is a mere duplication of the essential working parts of a device which involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

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With respect to claims 4-7, the same comments with respect to Allansson et al apply.

Furthermore, all JP references disclose a cooler and an EGR valve.

Double Patenting

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

16. Claims 1-8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,427,436 (Allansson et al) in view of Paas (5,785,030).

The same comments with respect to Allansson et al and Paas apply.

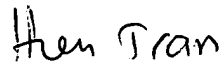
Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hien Tran
Primary Examiner
Art Unit 1764

HT
May 9, 2005